

IN THE DRAWINGS

The attached sheets of drawings include new Figs. 1-3. Support for the new figures is found in the originally filed claims, including the original claims. No new matter is added.

Attachment: New Sheets

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 6-11 and 18-37 are pending in this application. Claims 6-11, 18-19, 21 and 26-35 are amended, Claim 1-5 and 12-17 are cancelled without prejudice or disclaimer, and Claims 36-37 is new, each of which embodies aspects of original claims recast in independent form. Thus, support for the changes to the claims is found in the originally filed disclosure, including the original claims. No new matter is added.

In the outstanding Office Action, the drawings were objected to; Claims 1-35 were rejected under 35 U.S.C. §101; Claims 1-35 were rejected under 35 U.S.C. §112, second paragraph; and Claims 1-35 were rejected under 35 U.S.C. §102(b) as unpatentable over U.S. 2002/0151784 (Mizoguchi).

It is respectfully submitted the new drawing sheets overcome the objections to the drawings, and specifically, illustrate the claimed invention. Accordingly, withdrawal of the objection is respectfully requested.

The issues indicated in items 3-8 of the Office Action have been addressed by the amendments submitted herewith regarding the rejections under 35 U.S.C. §§101 and 112, second paragraph. Accordingly, withdrawal of these rejections is respectfully requested.

As to the rejection under 35 U.S.C. §102(b), Claim 36 recites:

A method for optimizing identification of a current position of an operating instrument in surgical navigation, including neuronavigation, with an operating microscope having an optoelectronic image receiver, the method comprising:

obtaining first location data of a location of the operating instrument ***from an optical or magnetic navigation system;***

obtaining second location data of a location of the operating instrument ***from the optoelectronic image receiver of the operating microscope***, including performing a depth of focus evaluation, a stereoscopic image analysis, or an evaluation of signals obtained by a PMD (Photonic Mixer Device) including the pertinent modulated illumination to supplement a depth component of the second location data; and

determining an actual position of the operating instrument in a three-dimensional coordinate system based on the obtained first and second location data.

[Emphasis added].

As emphasized above, Claim 36 recites obtaining first location data from an optical or magnetic navigation system, and further obtaining second location data from an optoelectronic image receiver of the operating microscope, including supplementing a depth component of the second location data. Supplementing the depth component of the second location data is performed by performing a depth of focus evaluation, a stereoscopic image analysis, or an evaluation of signals obtained by a PMD (Photonic Mixer Device) including the pertinent modulated illumination. It is respectfully submitted Mizoguchi is silent regarding these features.

In particular, Mizoguchi merely describes obtaining a location of a surgical instrument from “first sensing means for sensing the three-dimensional position of a microscope, with an operating site as the origin; second at least one first sensing means for sensing the three-dimensional position of a surgical instrument with respect to the microscope; and computing means for calculating the three-dimensional position of the surgical instrument, with the operating site as the origin, on the basis of the sense results of the first sensing means and second sensing means.”¹ Mizoguchi is silent regarding obtaining location data from an optoelectronic image receiver of an operating microscope, and is further silent regarding supplementing a depth component of the location data, as recited in Claim 36. Therefore, it is respectfully submitted Claim 36 (and any claim depending therefrom) is allowable over Mizoguchi.

Although directed to a different statutory class and/or varying in scope, Claim 37 is also allowable over Mizoguchi for substantially the same reasons as noted above regarding Claim 36.

¹ Mizoguchi, paragraph [0012].

Moreover, Applicant respectfully submits Mizoguchi is silent regarding the “brain shift problem,” which is the motion of brain tissue after the skullcap has been opened (i.e. during an operation). Thus, correction of such an aberration, as recited in Claims 8-11, is not disclosed or reasonably suggest in Mizoguchi. Therefore, it is respectfully submitted Claims 8-11 are further allowable over the cited references by virtue of this distinction.

Consequently, in view of the present amendment and in light of the above comments, it is respectfully submitted that this application is in condition for allowance. An early and favorable action to that effect is respectfully requested.

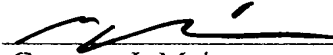
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Respectfully submitted,

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